

CLAIMS

1. A printhead comprising a processing driver head having a distributive processor integrated with an ink ejection driver head, the distributive processor being preprogrammed with a correction scheme that selectively prints ink drops for correcting printed artifacts.

2. The printhead of claim 1, wherein the correction scheme corrects systematic ink drop placement errors of the printhead.

3. The printhead of claim 1, further comprising a general correction scheme generated during manufacturing of a class of inkjet printheads.

4. The printhead of claim 3, wherein the general correction scheme includes corrections that cover additional errors that exist.

5. The printhead of claim 1, further comprising individual correction schemes generated during manufacturing of individual inkjet printheads.

6. The printhead of claim 5, wherein the individual correction schemes include corrections that cover additional errors that exist.

7. The printhead of claim 1, wherein the correction scheme is controlled by a printer driver as software operating on a computer system that is connected to the printhead.

8. The printhead of claim 1, wherein the correction scheme is preprogrammed as firmware and incorporated into a controller connected to the printhead.

9. The printhead of claim 1, wherein the correction scheme is encoded on a memory device incorporated into printhead.

10. The printhead of claim 1, wherein the correction scheme is generated at the time of at least one of printhead manufacturing or printhead

operation.

11. A method for correcting systematic printing errors of an inkjet printhead, comprising:

5 determining systematic errors that are associated with the printhead;
 recording and storing the systematic errors;
 generating a correction scheme to correct the systematic errors;

and

10 applying the correction scheme to the printhead during printing operations to selectively print ink drops for correcting printed artifacts produced by the systematic errors.

12. The method of claim 11, wherein the correction scheme is
 15 generated as a compensation operation that corrects alignment ink drop errors by instructing the printhead to strategically misalign the ink drops during normal operation of the printer.

13. The method of claim 11, wherein determining systematic errors
 20 that are associated with the printhead includes determining odd/even alignment offsets for the printhead.

14. The method of claim 11, wherein generating a correction scheme
 25 includes printing an alignment plot, examining the alignment plot to determine the correct alignment for main ink drops and storing the correct alignment in a memory device, wherein examining the alignment plot includes at least one of automatically examining the plot with an alignment sensor or manually examining the plot by a user.

30 15. The method of claim 14, further comprising, before a printing operation, reading the systematic errors and using the correct alignment data to eject ink drops during a printing operation that are intentionally misaligned to compensate for the systematic errors.

16. The method of claim 11, wherein generating a correction scheme includes firing droplets and examining the droplets during flight to determine the correct alignment for main ink drops and storing the correct alignment in a memory device.

5

17. The method of claim 16, further comprising, before a printing operation, reading the systematic errors and using the correct alignment data to eject ink drops during a printing operation that are intentionally misaligned to compensate for the systematic errors.

10

18. An inkjet printing system comprising:
a controller;
a printhead assembly in bi-directional communication with the controller and having a distributive processor integrated with an ink ejection driver head; and
wherein the distributive processor is preprogrammed with a correction scheme that selectively prints ink drops as instructed by the controller for correcting printed artifacts.

15

19. The inkjet printing system of claim 18, further comprising an ink supply for providing ink to the printhead assembly.

20

20. The inkjet printing system of claim 19, further comprising :
a media moving mechanism;
a printhead support mechanism that supports the printhead assembly in relation to the media moving mechanism; and
a removable ink supply container fluidically coupled to the printhead assembly for providing ink to the ink ejection driver head.

25